

Comparisons of Job Characteristics

Focus Occupation: [Biological Technicians \(19-4021\)](#)

Associated Occupation: [Agricultural and Food Science Technicians \(19-4011\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 77

Focus Occupation: Biological Technicians (19-4021)

Associated Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Biology	3.7	10.1	18.9	>>	Current knowledge level is likely more than sufficient
Chemistry	4.8	10.0	13.5	>>	Current knowledge level is likely more than sufficient
Food Production	2.1	9.1	2.5	<<	Extensive education and/or training may be required
Production and Processing	6.0	9.1	5.3	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Biological Technicians (19-4021)

Associated Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Writing	9.2	10.7	10.1	0	Current skill level may be sufficient
Mathematics	6.2	7.9	9.4	>	Skill level is likely sufficient
Science	4.5	7.8	11.2	>>	Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 94

Focus Occupation: Biological Technicians (19-4021)
Associated Occupation: Agricultural and Food Science Technicians (19-4011)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Oral Expression	12.4	12.0	11.1	0	Current ability level may be sufficient
Oral Comprehension	12.5	11.8	12.5	0	Current ability level may be sufficient
Written Expression	9.8	11.4	11.6	0	Current ability level may be sufficient
Written Comprehension	11.0	11.2	11.8	0	Current ability level may be sufficient
Near Vision	11.1	10.7	13.9	>>	Current ability level is likely more than sufficient
Problem Sensitivity	11.1	10.7	11.3	0	Current ability level may be sufficient
Deductive Reasoning	10.6	10.3	11.7	>	Current ability level is likely sufficient
Inductive Reasoning	10.2	10.0	12.6	>	Current ability level is likely sufficient
Category Flexibility	9.0	9.5	11.5	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	8.5	10.1	>	Current ability level is likely sufficient
Number Facility	6.3	7.4	8.7	>	Current ability level is likely sufficient
Time Sharing	6.6	7.1	5.1	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Biological Technicians (19-4021)
Associated Occupation: Agricultural and Food Science Technicians (19-4011)

Work Activities	Exclusivity of Activity
Adhere to safety procedures	12
Analyze biological research, test, or analysis data	70
Analyze chemical experimental, test, or analysis data or findings	69
Analyze scientific research data or investigative findings	27
Collect blood or tissue samples	92
Collect scientific or technical data	30
Collect statistical data	47
Communicate technical information	4
Compile numerical or statistical data	38
Conduct analyses or tests of organic compounds	71
Conduct field research or investigative studies	52
Conduct laboratory research or experiments	57
Conduct standardized qualitative laboratory analyses	62
Conduct standardized quantitative laboratory analyses	62
Cultivate micro-organisms for study, testing, or medical preparations	84
Develop or maintain databases	30
Develop tables depicting data	33

Examine biological or other material specimens under microscope	73
Feed or water animals	80
Follow microbiology procedures	74
Follow safe waste disposal procedures	50
Maintain laboratory or field equipment	87
Maintain records, reports, or files	5
Measure, weigh, or count products or materials	17
Obtain technical support instructions from scientists or engineers	87
Perform statistical analysis	71
Prepare reports	8
Prepare sample for laboratory testing, analysis, or microscopy	74
Recognize disease or parasites in animals	72
Recognize plant diseases	72
Recognize tree or forest plant species	78
Record test results, test procedures, or inspection data	48
Research human or animal disease	77
Set up or calibrate laboratory equipment	78
Sterilize or clean laboratory or healthcare equipment	82
Use biological research techniques	68
Use biological testing instruments	73
Use chemical testing or analysis procedures	54
Use clinical sterilizing technique	71
Use computers to enter, access or retrieve data	3
Use hazardous materials information	35
Use health or sanitation standards	62
Use knowledge of metric system	39
Use laboratory equipment	60
Use mathematical or statistical methods to identify or analyze problems	30
Use microscope	71
Use precision measuring tools or equipment	17
Use quality assurance techniques	61
Use quantitative research methods	35
Use relational database software	26
Use scientific research methodology	21
Use spreadsheet software	18
Use word processing or desktop publishing software	17
Work as a team member	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 71

Focus Occupation: Biological Technicians (19-4021)

Associated Occupation: Agricultural and Food Science Technicians (19-4011)

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Clinical and diagnostic analyzers and accessories and supplies	18
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Electrochemical measuring instruments and accessories	9
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory blending and dispersing and homogenizing equipment and supplies	27
Laboratory centrifuges and accessories	13
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory enclosures and accessories	17
Laboratory environmental conditioning equipment	24
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory water purification equipment and supplies	29
Pipettes and liquid handling equipment and supplies	16
Spectroscopic equipment	10
Test Tubes	26
Tissue culture and high throughput screening supplies	31
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.